

REMARKS

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

Applicants note the rejection of Claims 1-7 and 9-20 under 35 U.S.C. §102(b) as being anticipated by Fang, et al., U.S. Patent No. 6,454,027; and the rejection of Claim 8 under 35 U.S.C. §103(a) as being unpatentable over Fang, et al., as detailed in the Office Action.

However, upon careful consideration of the prior art reference of record, applicants respectfully submit that the claims clearly and unambiguously distinguish thereover.

Prior to traversing the rejection in view of Fang, et al., applicants have also indicated further amendments to the claims in that in order to restrict the property of both the cores and the matrix tube polycrystalline ultra-hard materials, the term "comprising" has been deleted from Claim 1 and replaced by "consisting essentially of". The foregoing clearly signifies that all of the essential components of both cores and matrix, with the exception of unavoidable impurities, are constituted of ultra-hard polycrystalline materials.

Furthermore, with regard to the specific materials, applicants have incorporated herein new Claim 21, which sets forth the different ceramic phases which can be employed when the matrix is constituted of PCBN encompassing cubic boron nitride grains, which are sintered to themselves and also selectively any various phases of the materials to impart the ultra-hard properties thereto.

The foregoing is clearly supported by the disclosure set forth in the last paragraph on Page 3 of the present specification, and is a further refinement of the structure as claimed in presently amended Claim 10.

Furthermore, Claims 14-18 have been cancelled without prejudice so as to still further advance the prosecution of the present application.

Basically, in order to distinguish over the structure disclosed in Fang, et al., the claims clearly signify that the composite material resides in one which possesses a polycrystalline ultra-hard material core in a matrix of a different polycrystalline ultra-hard material. In all of the examples, as set forth in the claims, the core is of a particular type, preferably such as PCD, and the matrix is of a further type, preferably of PCD or P_cBN or similar type of material.

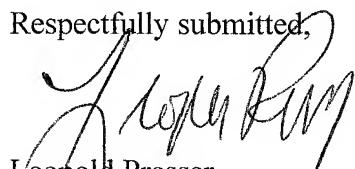
In contrast with the present invention, as set forth in the claims, the matrix of Fang, et al. always incorporates a ductile material, generally in the form of a cermet material, for example, as set forth in Claims 1, 4 and 5 and the disclosure in Fang, et al. This inclusion of a ductile material is precluded by the present invention wherein the term “consisting essentially of” is directed to the two types of ultra-hard polycrystalline materials, constituting both the cores and matrix with the sole materials being employed to the exclusion of other types of materials, which would unduly and adversely affect the ultra-hardness of the composite. The amended terminology, as presented herein, which limits the claims to that particular aspect and property, and particularly Claims 10 and 11, which are directed to the preferred embodiment, are also unknown from, nor even suggested by Fang, et al., and are thus clearly and unambiguously directed to allowable subject matter.

It remained for the present applicants to uniquely provide a composite material consisting of essentially two different types of ultra-hard materials forming cores and matrix with the preclusion of ductile or other such extraneous materials.

Accordingly, inasmuch as the claims have been amended to eliminate any possible interpretation thereof as being analogous to the Fang, et al. materials, the application and claims are deemed to be directed to clearly allowable subject matter, and the early and favorable reconsideration thereof and issuance of the Notice of Allowance by the Examiner is earnestly solicited.

However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,



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